STATE COOPERATIVE DRAFT AGENCY DECISION STATMENT
Kansas Department of Health and Environment
Bureau of Environmental Remediation

SITE NAME: **ONEOK FMGP – Concordia - (C5-015-70031)**

CITY/COUNTY: **Concordia/Cloud County**

DATE: **August 12, 2019**

MEDIA IMPACTED: **Soil and Groundwater**

LAND USE: **Commercial/Light Industry**

SITE BACKGROUND: The One Gas Inc. (ONE Gas), formerly known as ONEOK, Inc., Former Manufactured Gas Plant (FMGP), Site (Site) is located southeast of the intersection of Mill and Republican Streets, Concordia, Kansas and is zoned as light industrial (Figure 1). The earliest record of deeds citation notes that the Concordia Gas Company took title to the property in 1915. Manufactured Gas operations ceased in or around 1930 when the Gas Corporation of Concordia was acquired by the Kansas Pipe Line & Gas Company. The property (currently zoned as Light Industrial) is now owned by the Abram Ready Mix Plant. No buildings associated with the Site remain (Figure 2).

ONE Gas completed a Site Investigation characterizing soils in 2003. Two exploratory trenches delineated a below-grade gas holder, tank (unknown use), cistern and other process equipment locations. PAHs, BTEX, arsenic and lead were the primary contaminants detected that exceeded Kansas Department of Health and Environment (KDHE), Risk Based Standards for Kansas, RSK Manual - 5th Version (October 2010, revised March 2014 and September 2015) (RSK) residential Tier-2 values for one or more PAH compounds.

In 2008 ONE Gas completed an Interim Removal Action (IRA). The IRA excavated approximately 1,304 tons of soil, ending when groundwater was encountered at 23 feet below ground surface. The excavation was lined with a geotextile barrier and backfilled with clean fill. The surface was graded with six inches of crushed rock to match the existing grade. Confirmation sampling indicate that the IRA successfully removed most of the soil impacted above RSK Tier 2 levels. Existing building foundations and concrete slabs prevented complete removal of contaminated soil.

To prevent possible future exposure to soil and groundwater contamination ONE-Gas prepared a Environmental Use Control Agreement (EUCA) restricting future land use to non-residential and prohibiting drilling, construction or use of water wells for domestic purposes. The EUC was recorded by the Cloud County Register of Deeds December 2009.

Five groundwater monitoring wells installed in 2007 were sampled multiple times between 2007 and 2017. Only arsenic has been detected above its RSK Residential Tier-2 value (0.01 milligrams per Liter – mg/L) for groundwater. Data from the most

recent groundwater sampling event (2017) identified arsenic concentrations ranging from 0.0106 mg/L (CMW-02) to 0.0206 mg/L (CMW-05).

ONE Gas completed a background assessment of arsenic levels in groundwater in August 2011. Analytical results ranged between 0.0020 milligrams per liter and 0.0062 mg/L. The RSK Tier-2 Residential level for Arsenic is 0.01 milligrams per Liter (mg/L). The background assessment results note that the background arsenic levels do not contribute to the arsenic concentrations in groundwater on Site.

SITE RECEPTORS The PAH naphthalene remains in subsurface soil at 1.3 milligrams per kilogram (mg/kg) which exceeds the RSK Tier-2 residential (0.349 milligram per kilogram (mg/kg)) and non-residential (0.659 mg/kg) soil-to-groundwater pathway values. Workers involved in or with excavation activities could be exposed to residual soil contamination.

In the most recent groundwater sampling event only arsenic was detected above the RSK Tier-2 Residential value (0.01 mg/L). Ingestion of Site groundwater thus would create a potential completed exposure pathway.

REMEDIAL PLAN: The contaminants of concern are naphthalene in subsurface soil and arsenic in groundwater. Remedial action objectives include: 1) preventing human exposure through direct contact with contaminated soil; 2) preventing human exposure through direct contact and/or ingestion of contaminated groundwater, and 3) restoring groundwater conditions to the extent practicable. The corrective action goals are meant to achieve KDHE RSKs for Residential and Non-Residential concentrations. Groundwater monitoring will continue until the Site is eligible for closing in accordance with KDHE Bureau of Environmental Remediation (BER) Policy, BER-RS-024, *Site Closure in the State Cooperative Program.*

The recommended remedial alternative identified in the Corrective Action Study is Alternative 2 – long-term groundwater monitoring which includes all previously completed excavation, response actions, and the Environmental Use Control (recorded with the Cloud County Register of Deeds, December 2009). The total Alternative cost including all previously completed response actions is $654,444.69 (net present value).

REMEDY SELECTION KDHE recommends selection of Alternative 2. This alternative is the most cost effective remedial action that is protective of human health and the environment. This remedy provides performance monitoring of selected groundwater monitoring wells. KDHE may modify this recommended selection in response to public comments received during the public comment period and/or if new information becomes available.

COMMUNITY INVOLVEMENT: A Public Information Plan for the Site was developed by KDHE and includes implementation criteria satisfying public participation requirements. Public notice of the availability of the Draft Agency Decision Statement (ADS) will be published in the

Concordia Blade Empire on August 12, 2019. The Draft ADS and other selected administrative file documentation will be available for review at the Frank Carson Library, 702 Broadway, Concordia, Kansas 66901 from August 12, 2019 through August 27, 2019. All pertinent documents related to the Former Manufactured Gas Plant site are also available for review at the KDHE offices in Topeka, Kansas during this public comment period. To review documents in Topeka, please contact John K. Cook, Professional Geologist at 785-296-8986. Public comments on the Draft ADS may be submitted to KDHE in writing during the 15-day public comment period at the address listed below.

Kansas Department of Health and Environment
Bureau of Environmental Remediation
1000 SW Jackson Street, Suite 410
Topeka, KS 66612
Contact – John K. Cook, Professional Geologist
Site Restoration Unit
Phone: 785-296-8986

The Draft ADS and other pertinent administrative file documents are available for review on the KDHE website, at:

http://www.kdheks.gov/remedial/site_restoration/FMGP_Concordia.html

Comments on the Draft ADS may also be submitted to KDHE by electronic mail to John.Cook@ks.gov. Comments sent by electronic mail must be received by KDHE no later than 5:00 p.m. on August 27, 2019. Through this process, the public and other interested parties are given the requisite opportunity to provide input on the proposed corrective action strategy for the Site before the Agency Decision Statement is finalized.

Tables: Table 1 - COC Concentrations Summary in Soil Before and After Removal Action

Table 2 - Summary – PAH/Inorganic Concentrations in Groundwater

Figures: Figure 1 – Site Vicinity

Figure 2 - Excavation Area and Monitoring Well Locations

TABLE 1 – COC CONCENTRATIONS SUMMARY IN SOIL BEFORE AND AFTER REMOVAL ACTION

Contaminant of Concern	Residential Tier 2 Level* (Soil Pathway) (mg/kg)	Residential Tier 2 Level* (Soil to Groundwater Pathway) (mg/kg)	Before IRA** Concentration (mg/kg)	After IRA** Concentration (mg/kg)
Benzo(a)anthracene	10.90	7.89	**670**	ND
Benzo(a)pyrene	1.09	23.50	**350**	ND
Benzo(b)fluoranthene	10.90	19.20	**300**	ND
Benzo(k)fluoranthene	109	190	**170**	ND
Chrysene	1,090	805	**510**	ND
Fluorene	2360	297	**1300**	ND
Naphthalene	30.50	0.349	**9900**	**1.3**
Benzene	15.9	0.168	**130**	0.15
Ethylbenzene	82	65.6	**210**	ND
Toluene	4320	51.2	**160**	ND

**KDHE's Risk Based Standards for Kansas (RSK) Manual, October, 2010*
mg/kg = milligrams per kilogram
ND = Not Detected Above Analytical Detection Methods/Limits

TABLE 2 – SUMMARY – PAH/INORGANIC CONCENTRATIONS IN GROUNDWATER

Contaminant of Concern	Residential Tier 2 Level *	Maximum Detected Concentration	Most Recent Detected Concentration
	mg/L		
Arsenic	0.01	**0.049**	**0.0206**
Cadmium	0.005	**0.032**	ND
Chromium (total)	0.1	**0.17**	ND
Lead	0.015	**0.074**	ND
Silver	0.0799	**0.19**	ND

**KDHE's Risk Based Standards for Kansas (RSK) Manual, October, 2010*
Note = No PAH Compounds Have Been Detected above RSK criteria in Groundwater
mg/L = milligrams per Liter
ND = Not Detected Above Analytical Method Limits

Figure 1 - Site Vicinity

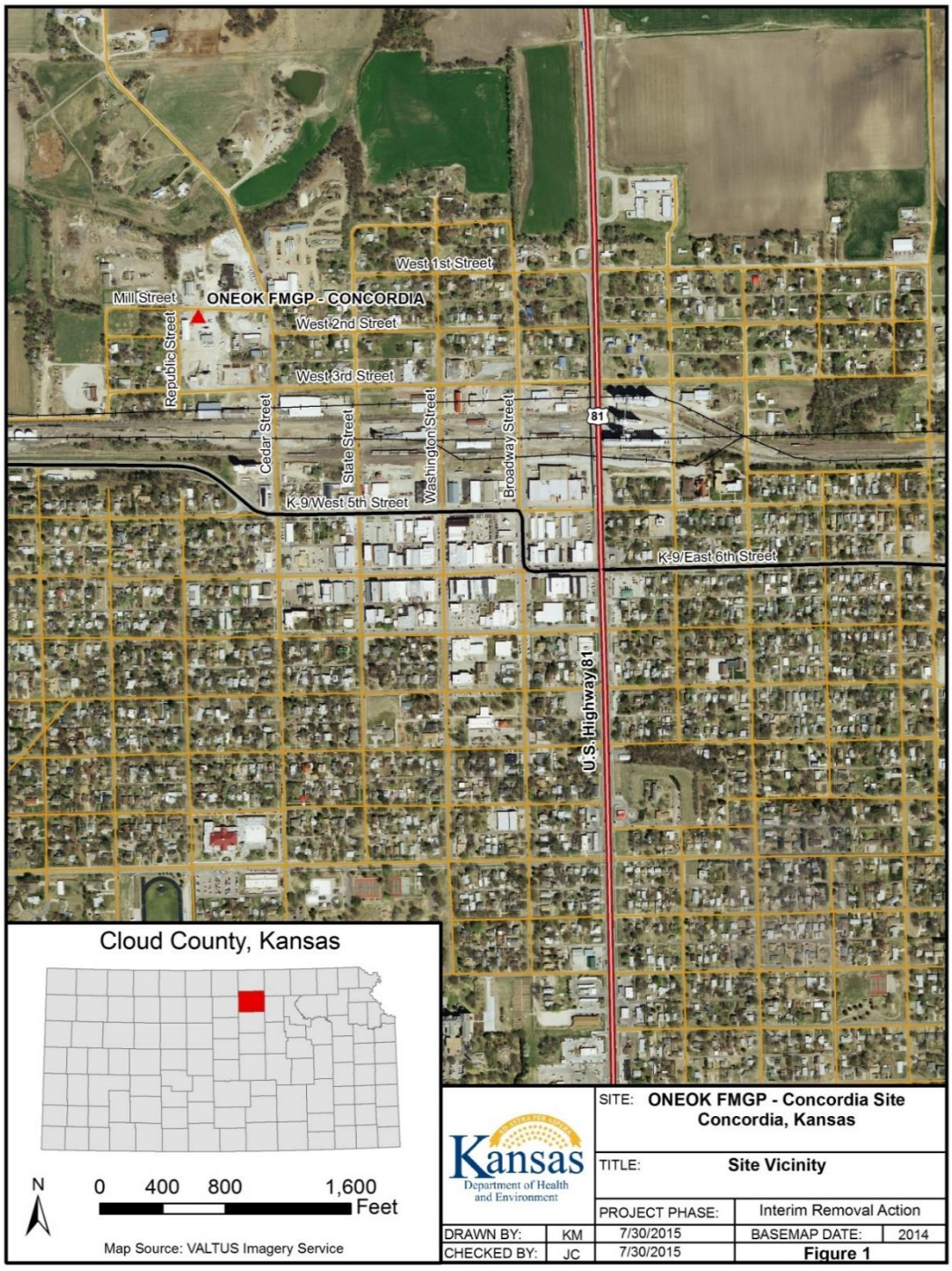

Figure 2 - Excavation Area and Monitoring Well Locations

Draft Agency Decision Statement
ONE-Gas Inc., Former Manufactured Gas Plant Site
Concordia
August 12, 2019

AGENCY APPROVAL:

Bob Jurgens Deputy Bureau Director Bureau of Environmental Remediation	Date
Randy Carlson**,** P.G. Chief, Remedial Section	Date
John K. Cook, P.G. Project Manager	Date